



SIGMA-ALDRICH

Material Safety Data Sheet

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Version 1.4

According to 91/155/EEC

Classified as Hazardous according to the criteria of EU Annex 1 and NOHSC.

1 - Product and Company Information

Product Name CHOLINE CHLORIDE CELL CULTURE TESTED
Product Number C7527

Company Sigma-Aldrich Pty. Ltd.
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Australia

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2 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I Index Number
CHOLINE CHLORIDE	67-48-1	200-655-4	None

Formula C5H14NO.Cl
Molecular Weight 139.63 AMU
Synonyms Ammonium, (2-hydroxyethyl)trimethyl-, chloride *
Biocolina * Choline chloride * Choline
chlorhydrate * Choline hydrochloride * Cholinium
chloride * Chloride de choline (French) *
Hepacholine * (2-Hydroxyethyl)trimethylammonium
chloride * Lipotril

3 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT
Irritating to eyes, respiratory system and skin.

4 - First Aid Measures

AFTER INHALATION

If inhaled, remove to fresh air. If not breathing give
artificial respiration. If breathing is difficult, give oxygen.

AFTER SKIN CONTACT

In case of contact, immediately wash skin with soap and copious
amounts of water.

AFTER EYE CONTACT

In case of contact, immediately flush eyes with copious amounts
of water for at least 15 minutes.

AFTER INGESTION

If swallowed, wash out mouth with water provided person is

conscious. Call a physician.

5 - Fire Fighting Measures

EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

SPECIAL RISKS

Specific Hazard(s): Emits toxic fumes under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6 - Accidental Release Measures

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

7 - Handling and Storage

HANDLING

Directions for Safe Handling: Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE

Conditions of Storage: Keep tightly closed.

SPECIAL REQUIREMENTS: Hygroscopic. Store under inert gas.

8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator.

Hand Protection: Compatible chemical-resistant gloves.

Eye Protection: Chemical safety goggles.

9 - Physical and Chemical Properties

Appearance

Physical State: Solid
Color: White

Property

Value

At Temperature or Pressure

pH	5.0 - 6.5
BP/BP Range	N/A
MP/MP Range	302.0 - 305.0 °C
Flash Point	N/A
Flammability	N/A
Autoignition Temp	N/A
Oxidizing Properties	N/A
Explosive Properties	N/A
Explosion Limits	N/A
Vapor Pressure	N/A
SG/Density	N/A
Partition Coefficient	N/A
Viscosity	N/A
Vapor Density	N/A
Saturated Vapor Conc.	N/A
Evaporation Rate	N/A
Bulk Density	N/A
Decomposition Temp.	N/A
Solvent Content	N/A
Water Content	N/A
Surface Tension	N/A
Conductivity	N/A
Miscellaneous Data	N/A
Solubility	Solubility in Water:1.0 M in H2O clear, colorless

10 - Stability and Reactivity

STABILITY

Stable: Stable.

Conditions to Avoid: Moisture.

Materials to Avoid: Strong oxidizing agents, Strong acids, Strong bases.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Hydrogen chloride gas, Nitrogen oxides Carbon monoxide, Carbon dioxide.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

11 - Toxicological Information

RTECS NUMBER: KH2975000

ACUTE TOXICITY

LD50 LD50

Oral Oral

Rat Rat

3400 mg/kg 3400 mg/kg

Remarks: Lungs, Thorax, or Respiration:Respiratory depression.

Behavioral:Excitement. Sense Organs and Special Senses (Nose,

Eye, Ear, and Taste):Eye:Chromodacryorrhea. Sense Organs and

Special Senses (Nose, Eye, Ear, and

Taste):Eye:Chromodacryorrhea. Behavioral:Excitement. Lungs,

Thorax, or Respiration:Respiratory depression.

LD50 LD50

Intraperitoneal Intraperitoneal

Rat Rat

450 MG/KG 450 MG/KG

LD50 LD50
Oral Oral
Mouse Mouse
3900 mg/kg 3900 mg/kg
Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Lacrimation. Behavioral:Convulsions or effect on seizure threshold. Lungs, Thorax, or Respiration:Respiratory depression. Lungs, Thorax, or Respiration:Respiratory depression. Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Lacrimation. Behavioral:Convulsions or effect on seizure threshold.

LD50 LD50
Intraperitoneal Intraperitoneal
Mouse Mouse
320 MG/KG 320 MG/KG

LD50 LD50
Intravenous Intravenous
Mouse Mouse
53 MG/KG 53 MG/KG
Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Lacrimation. Behavioral:Convulsions or effect on seizure threshold. Lungs, Thorax, or Respiration:Respiratory depression. Lungs, Thorax, or Respiration:Respiratory depression. Behavioral:Convulsions or effect on seizure threshold. Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Lacrimation.

SIGNS AND SYMPTOMS OF EXPOSURE

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

ROUTE OF EXPOSURE

Skin Contact: Causes skin irritation.
Skin Absorption: May be harmful if absorbed through the skin.
Eye Contact: Causes eye irritation.
Inhalation: May be harmful if inhaled. Material is irritating to mucous membranes and upper respiratory tract.
Ingestion: May be harmful if swallowed.

CHRONIC EXPOSURE - MUTAGEN

Hamster Hamster
500 UG/L 500 UG/L
Cell Type: ovary ovary
Cytogenetic analysis Cytogenetic analysis

Hamster Hamster
500 UG/L 500 UG/L
Cell Type: ovary ovary
Sister chromatid exchange Sister chromatid exchange

12 - Ecological Information

No data available.

13 - Disposal Considerations

SUBSTANCE DISPOSAL

Contact a licensed professional waste disposal service to dispose

of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

14 - Transport Information

RID/ADR

Non-hazardous for road transport.

IMDG

Non-hazardous for sea transport.

IATA

Non-hazardous for air transport.

15 - Regulatory Information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

INDICATION OF DANGER: Xi

Irritant.

R-PHRASES: 36/37/38

Irritating to eyes, respiratory system and skin.

S-PHRASES: 26-36

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.

COUNTRY SPECIFIC INFORMATION

Germany

WGK: 1

ID-Number: 1134

KBwS-Decision

16 - Other Information

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2007 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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